SUBMERGED MEMBRANE COUPLED ACTIVATED SLUDGE SYSTEM USING INTERMITTENT AERATION FOR SIMULTANEOUS REMOVAL OF NITROGEN AND PHOSPHORUS

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Abstract of KR20020090967

PURPOSE: A submerged membrane coupled activated sludge system using intermittent aeration for simultaneous removal of nitrogen and phosphorus is provided. CONSTITUTION: The operation of anoxic process include s inflow of sewage/wastewater into an anoxic/anaerobic tank(2) continuously; recycling wastewater of an aeration tank(5) into the anoxic/anaerobic tank for anoxic condition; denitrification of recycled nitrite using organics of raw sewage/wastewater as carbon source; nitrification a nd organics deco mposition in the aeration tank; and discharging treated water by the submerged membrane(6). Also, the operation of anaerobic process includes inf low of sewage/wastewater into the anoxic/anaerobic tank continuously; stop recycling wastewater of an aeration tank into the anoxic/anaerobic tank for anaerobic condition; phosphorus release using organics of raw sewage/wastewater as carbon source; phosphorus luxury uptake and nitrification in the aeration tank; discharging treated water by the submerged membrane; and discharging sludge for removing phosphorus.